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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of Manning, et al.	)	Attorney Docket No. 3151/1
Serial No. 10/668,067	)	Group Art Unit: Unknown
Filed: September 22, 2003	)	Examiner: Unknown

For METHOD OF TREATING OSTEOARTHRITIS WITH INDUCIBLE NITRIC OXIDE SYNTHASE INHIBITORS

September 1, 2004

Commissioner of Patents
PO Box 1450
Alexandria, VA 22313

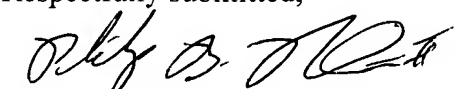
SIR:

INFORMATION DISCLOSURE STATEMENT

In accordance with 37 C.F.R. 1.97 and 1.98 and MPEP 609, and in compliance with the duty of disclosure set forth in 37 C.F.R. 1.56, applicants submit herewith various documents cited on the attached Form PTO 1449. Applicants respectfully request that the Examiner consider and enter all the documents cited on the enclosed Form PTO 1449 into the file of the above-identified application. Applicants also request an indication of the same by return of the Form PTO 1449 being initialed and dated by the Examiner.

No additional fees are believed due to ensure consideration of the attached documents by the Examiner. However, if any additional fees are required or an overpayment of fees made, the Commissioner is hereby authorized to debit or credit our Deposit Account No. 19-1025, as necessary.

Respectfully submitted,



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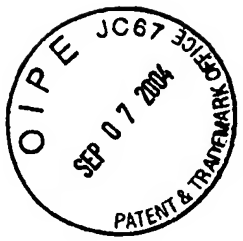

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

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I hereby certify that these papers or fee is being deposited with the United States Post Office to Addressee service under 37 CFR 1.10 & 1.8 on the date indicated above and is addressed to the Commissioner for Patents, PO Box 1450, Alexandria, VA 22313

IDS Statement
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FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE, PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO.: 3151	APPLICATION NO.: 10/668,067
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	INVENTOR: Manning, et al.	
(Use several sheets if necessary)	Filed: 9/22/2003	Group:

U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	1	5684008	11/4/97	Hallinan	31	41	11/9/94
	2	5629322	5/13/97	Guthikonda	31	47	6/6/95

FOREIGN PATENT DOCUMENTS

Examiner Initial							Translation	
		Document Number	Date	Country	Class	Subclass	Yes	No
	3	93/13055	7/8/93	PCT				

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Examiner Initial		
	4	N. McCartney-Francis, 1993, Suppression of Arthritis by an inhibitor of nitric oxide synthase, The Journal of experimental medicine.178: 749-754
	5	A.R. Amin, 1995, The expression and regulation of nitric oxide synthase in human osteoarthritis-affected chondrocytes: evidence for an inducible "neuronal-like" nitric oxide synthase. J. Exp. Med. 182:2097-2102
	6	Pelletier, J. P., J. Martel-Palletier, and D.S. Howell. 1997. Etiopathogenesis of osteoarthritis. In Arthritis and Allied Conditions. A Textbook of Rheumatology. W. J. Koopman, editor, Williams & Wilkins, Baltimore. 1969-1984
	7	Dean, D. D. 1991. Proteinase-mediated cartilage degradtion in osteoarthritis.[Review]. Semin. Arthritis Rheum. 20:2-11
	8	Dore, S., J. P. Pelletier, J. A. DiBattista, G. Tardif, P. Brazeau, and J. Martel-Pelletier. 1994. Human osteoarthritic chondrocytes possess an increased number of insulin-like growth factor 1 binding sites but are unresponsive to its stimulaton. Possible role of IGF-1-Binding Proteins. Arthritis Rheum. 37:253-263
	9	Hickery, M. S., R. M. J. .Palmer, I. G. Charles, S. Moncada, and M. T. Bayliss. 1994. The role of nitric oxide in IL-1 and TNFa-induced inhibition of proteoglcan synthesis in human articular cartilage. Trans Orthop Res Soc 19:77.(Abstr.)
	10	Taskiran, D., M. Stefanovic-Racic,H. Georgescu, and C. Evans. 1994. Natric oxide meiates suppression of cartilage proteglycan synthesis by interleukin-1. Biochem.Biophys. Res Commun. 200:142-148
	11	Jarvinen,T. A. H., T. Moilanen, T. L. N.Jarvinen, and E. Moilanen. 1995. Nitric oxide mediates interleukin-1 induced inhibition of glycosaminogylcan synthesis in rat articular cartilage. Mediators of Inflamation 4:107-111
	12	Stadler, J., M. Stefanovic-Racic, T. R. Billiar, R.D. Curran, L. A. McIntyre, H. I. Georgescu, R. L. Simmons, and C.H. Evans. 1991. Articular chondrocytes synthesize nitric oxide in response to cytokines and lipopolysaccharide. J. Immunol. 147:3917-3920
	13	Palmer, R. M. J., M. S. Hickery, I. G. Charles, S. Moncada, and M.T. Bayliss. 1993. Induction of nitric oxide synthase in human chondrocytes. Biochem. Biophys. Res. Commun. 193:398-405
	14	I. G. Charles, R. M. Palmer, M. S. Hickery, M. T. Bayliss, A. P. Chubb, V. S. Hall, D. W. Moss and S. Moncada. 1993. Cloning, charaterization and expression of a cDNA ecoding and inducible nitric oxide synthase from the human chondrocyte. Proc. Natl. Acad. Sci. USA. 90:11419-11423
	15	Pelletier, J. P., F. Mineau, P. Ranger, G. Tardif, and J. Martel-Pelletier. 1996. The increased synthesis of inducible nitric oxide inhibits IL-1Ra synthesis by human articular chondrocytes: possible role in osteoarthritic cartilage degradation. Osteoarthritis Cartilage 4:77-84

	16	I. B. McInnes, B. P. Leung, M. Field, X. Q. Wei, F. –P. Huang, R. D. Sturrock, A. Kinninmonth, J. Weidner, R. Mumford and F. Y. Leiw. 1996. Production of nitric oxide in the synovial membrane of rheumatoid and osteoarthritis patients. J. Exp. Med. 184:1519-1524
	17	Farrell, A. J., D. R. Blake, R. M. Palmer, and S. Moncada. 1992 Increased concertration of nitrite in synovial fluid and serum samples suggest increased nitric oxide synthesis in rheumatic diseases. Ann Rheum. Dis. 51 :1219-1222
	18	Sakuri, H., H. Kohsaka, M. Liu, H. Higasshiyama, Y. Hirata, K. Kanno, I. Saito, and N. Miyasaka. 1995. Nitric Oxide production and inducible nitric oxide synthase expression in inflammatory arthritis. J. Clin. Invest. 96:2357-2363
	19	Cannon, G. W., S. J. Openshaw, J. B. Hibbs, Jr., J. R. Hoidal, T. P. Huecksteadt, and M.M. Griffiths. 1996. Nitric oxide production during adjuvant-induced and collagen-induced arthritis. Arthritis Rheum. 39:1677-1684
	20	Evans, C.H., M. Stefanovic-Racic, and J. Lancaster. 1995. Nitric oxide and its role in orthopaedic disease. Clin Orthop 312:275-294
	21	Stefanovic-Racic, M., J. Stadler, and C. H. Evans. 1933. Nitric oxide and arthritis. Arthritis Rheum. 36:1036-1044
	22	Murrell, G. G. C., D. Jang, and R. J. Williams. 1995. Nitric oxide activites metalloprotease enzymes in articular cartilage. Bioochem Biophys Res Commun 206:15-21
	23	Connor, J.R., P. T. Manning, S. L. Settle, W. M. Moore, G. M. Jerome, R. K. Webber, F. S. Tjoeng, and M. G. currie. 1995. Suppression of adjuvant-induced arthritis by selective inhibition of inducible nitric oxide synthase. Eur J Pharmacol 273 :15-24
	24	Stefanovic-Racic, M., K. Meyers, C. Meschter, J.W. Coffey, R. A. Hoffman, and C. H. Evans. 1994. N-monomethy arginine, an inhibitor of nitric oxide synthase, suppresses the development of adjuvant arthritis in rats. Arthritis Rheum. 37:1062-1069
	25	Stefanovic-Racic, M., K. Meyers, C. Meschter, J. W. Coffey, R. A. Hoffman, and C. H. Evans. 1995. Comparison of the nitric oxide synthase inhibitors methylarginine and aminoguanidine as prophylactic and therapeutic agents in rat adjuvant arthritis. J. Rheumatol. 22:1922-1928
	26	Moore, W. M., R. K. Webber, G. M. Jerome, F. S. Tjoeng, T. P. Misko, and M. G. Currie. 1994. L-N6-(1 – Iminoethyl) lysine: a selective inhibitor of inducible nitric oxide synthase. J Med Chem 37:3886-3888
	27	Maier, R., G. Bible, J. Rediske, and M. Lotz. 1994. Inducible nitric oxide synthase from human articular chondrocytes: cDNA cloning and analysis of mRNA expression. Biochim. Biophys. Acta 145:1208 (Abstr.)
	28	Pelletier, J. P., J. A. DiBattista, J. P. Raynauld, S. Wilhelm, and J. Martel-Pelletier. 1995. The in vivo effects of intraarticular corticosteriod injections on cartilage lesions, stromelysin, iterleukin-1 and oncogene protein synthesis in experimental osteoarthritis. Lab. Invest. 72:578-586
	29	Pelletier, J. P., F. Mineau , J. P. Raynauld, J. F. Jr. Woessner, Z. Gunja-Smith, and J. Martel-Pelletier. 1994. Inraarticular injections with methylprednisolone acetate reduce osteoarthritis lesions in Parallel with chondrocyte stormelysin syntheis in experimental osteoarthritis. Arthitis Rheum. 37:414-423
	30	Fernandes, J. C., J. Martel-Pelletier, I. G. Otterness, A. Lopez-Anaya, F. Mineau, G. Tardif, and J. P. Pelletier. 1995. Effectes of tenidap on caine experimental osteoarthritis: I. Morphologic and metalloprotease anslysis. Arthritis Rheum. 38:1290-1303
	31	Mankin, H. J., H. Dorfman, L. Lippiello, and A. Zarins. 1971. Biochemical and metabolic abnormalities in articular cartilage from osteoarthritis human hips. II. Correlation of morphology with biochemical and metabolic data. J. Bone Joint Surg. Am. 53:523-537
	32	Cawson, T. E. and A. J. Barrett. 1979. A rapid and reproducible assay for collagenase using [1 – 14C] acetylated collagen. Anal. Biochem. 99:340-345

	33	Chavira, R. Jr., T. J. Burnett and J. H. Hageman. 1984. Assaying proteinases with azocoll. Anal. Biochem. 136:446-450
	34	Brandt, K. D. 1994. Insights into the natural history of osteoarthritis provided by the cruciate-deficient dog. An animal model of osteoarthritis. [Review]. Ann. NY Acad. Sci. 732:199-205
	35	Caron, J. P., J. C. Fernandes, J. Martel-Pelletier, G. Tardif, F. Mineau, C. Geng, and J. P. Pelletier. 1996. Chondroprtective effect of intraarticular injections of interleukin-1 receptor antagonist in experimental osteoarthritis: suppression of collagenase-1 expression. Arthritis Rheum. 39:1535-1544
	36	Van Beuningen, H. M., P. M. Van der Kraan, O. J. Arntz, and W. B. van den Berg. 1994. Transforming growth factor-beta 1 stimulates articular chondrocyte proteoglycan synthesis and induces osteophyte formation in the murine knee joint. Lab. Invest. 71:279-290
	37	Blanco, F. J., R. L. Ochs, H. Schwarz and M. Lotz. 1995. Chondrocyte apoptsis induced by nitric oxide. Am. J. Pathol. 146:75-85
	38	Beckman, J. S. and Koppenol. 1996. Nitric oxide, superoxide and peroxynitrite: the good, the bad, and the ugly. Am. J. Physiol. 271:C1424-C1437
	39	Salvemini, D., P. T. Manning, B. S. Zweifel, K. Siebert, J. Connor, M. G. Curri, P. Needleman, and J. L. Masferrer. 1995. Dual inhibition of nitric oxide and prostaglandin production contributes to the antiinflamitory properties of nitric oxide synthase inhibitors. J. Clin. Invest. 96:301-308
	40	Salvemini, D., Z. –Q. Wang, P. S. Wyatt, D.M. Bourdon, M. H. Marino, P. T. Manning, and M. G. Currie. 1996. Nitric oxide: a key mediator in the early and late phase of carrageenan-induced rat paw inflammation. Br. J. Pharmacol. 118:829-838

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